



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,667	07/14/2003	Jun Sumino	67161-068	4737
20277	7590	12/07/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP			PRENTY, MARK V	
600 13TH STREET, N.W.			ART UNIT	
WASHINGTON, DC 20005-3096			PAPER NUMBER	
			2822	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/617,667	<b>Applicant(s)</b> SUMINO ET AL.	
	<b>Examiner</b> MARK PRENTY	<b>Art Unit</b> 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-8 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>November 7, 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

This Office Action is in response to the RCE filed on November 21, 2005.

Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent 6,620,681 to Kim et al. (Kim).

With respect to independent claim 9, Kim discloses a semiconductor device (see the entire reference, particularly the Figs. 2A-2I and Fig. 3 disclosure) comprising: a semiconductor substrate 100, having a main surface, in which first and second trenches 109 are formed in said main surface at a distance away from each other; first and second isolation insulating films 112 filling in said first and second trenches (see the Fig. 2E disclosure, and note that Figs. 2F-2I's elements 124 are composites of Fig. 2E's elements 110 and 112); a silicon-containing insulating film 101/102, formed on said main surface located between said first isolation insulating film and said second isolation insulating film, having an end portion in a bird's beak (Fig. 3's "a"); a silicon film 103/104 formed on said silicon-containing insulating film, having a thickness exceeding 0 and being less than 50 nm (see column 5, lines 52-55) in an intermediate portion between said first isolation insulating film and said second isolation insulating film, and being thinner than said thickness on said end portion (see Fig. 3); and sidewall insulating films 110 (see Figs. 2D-2E), formed between said silicon-containing insulating film 101/102 and each of said first and second insulating films 112 so as to [bring into] contact [with] the sidewalls of said silicon film 103/104 and said silicon-containing insulating film 101/102.

Claim 9 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Kim.

Claims 1 and 3-8 are allowable over the prior art of record.

Art Unit: 2822

United States Patent 6,933,194 is relevant to this application.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.

  
Mark V. Prenty  
Primary Examiner